

REMARKS

Upon entry of the present amendments, claims 1-6, 28, 31, 32, and 35-42 will be pending in the application. Claims 1, 36, and 39 have been amended for clarification. New claim 42 has been added.

Applicants acknowledge and appreciate the indication of allowability for claims 28, 31, 32, and 35-41.

This response is filed with a Request for Continued Examination (RCE) as well as a supplemental Information Disclosure Statement that includes references cited in the prosecution of related co-pending divisional application no. 11/626,729.

Rejections under 35 U.S.C. §112

Claims 1-6 stand currently rejected under 35 U.S.C. §112 as allegedly failing to comply with the written description requirement.

In making this rejection, the Examiner specifies that the recitations “wherein 2.0 to 9.7 wt %, based upon total coating material, of the at least one low molecular weight (meth)acrylate compounds are considered ‘new matter’ because the claims subject matter was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention” (Office Action at page 3). In particular, Applicants indicated how the data in Table 8 of Applicants’ response filed August 8, 2007 supported the claimed concentration. The Office Action, however, asserts the clause at issue is not supported because (a) “applicants fail to recognize that the Table in page 8 does not disclose any (meth)acrylate compound; the table only discloses acrylate compounds” and that, therefore, “the concentration teachings of acrylate compounds taught in the Table [do] not adequately provide support of the concentration of (meth)acrylate compounds as claimed” (*id.* at page 3) and (b) even if it did, “the support of the concentration of a species does not support the concentration of its genus” (*id.* at page 4).

Applicants continue to respectfully disagree with this rejection as it is based on an erroneous interpretation of “(meth)acrylate.” Moreover, the conclusions reached in the

Office Action fail to meet the burden of overcoming the adequacy of the written description, especially in view of the substantial argument and evidence provided by Applicants.

In asserting a rejection under §112, first paragraph, the Examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976). It is also the Examiner's burden to fully respond to an applicant's rebuttal arguments, and properly treat any further showings submitted by applicant (MPEP §2163.04). Moreover, any affidavits relevant to the §112, paragraph 1, written description requirement, must be thoroughly analyzed and discussed in the next Office action (*id.*). The Examiner has not met these requirements.

“(Meth)acrylate” Refers To Both Acrylate And Methacrylate

One of ordinary skill in the art would understand that that the parenthesis added to “methacrylate” to make it “(meth)acrylate” serves as shorthand for “acrylate or methacrylate.” This meaning is supported by the specification, the substantial evidence concerning the common usage of the term from the public domain previously submitted during prosecution, and the declaration of Holger Endres (“Endres Decl.”) submitted with Applicants' response of December 9, 2009

Specification

For example, as stated in Applicants' appeal brief of October 9, 2009 (incorporated by reference in Applicants December 9, 2009 response), the specification refers to “acrylates” as “(meth)acrylates”, and “methacrylates” as having “(meth)acrylate” groups, clearly evidencing the fact that the “(meth)acrylate” term refers to both acrylates and methacrylates:

The following **(meth)acrylates** are examples of monofunctional **acrylate** compounds which can be used: linear, branched or cyclic alkyl **(meth)acrylates**, (Specification at page 5, lines 24-26);

It may be advantageous to disperse these components in portions of the liquid **acrylate** compounds prior to addition to the coating material (Specification at page 7, lines 35-37);

Preferably, the coating materials are to contain **methacrylate** compounds which have acidic groups and contain one, two or more **(meth)acrylic** groups and in addition acidic functional groups (Specification at page 6, lines 19-22).

Also, the fact that the Examples in the specification use acrylates to exemplify certain embodiments of the invention further supports the fact that use of the term “(meth)acrylate” throughout the specification cannot simply refer to methacrylates to the exclusion of acrylates. The Office Action does not address any of this evidence in maintaining the §112, first paragraph, rejection.

Public Domain/Common Usage

Applicants have also submitted evidence from the public domain that supports the fact that “(meth)acrylate” refers to both “acrylate” and “methacrylate”:

- Brochure of Rahn AG, maker of acrylates and methacrylates (previously provided as Appendix B of October 9, 2009 Appeal Brief);
- Whittington’s Dictionary of Plastics (previously provided as Appendix B of October 9, 2009 Appeal Brief);
- Hawley’s Condensed Chemical Dictionary (previously provided as Appendix B of October 9, 2009 Appeal Brief);
- US Patent No. 4,642,362: “In addition to reaction with acid halides, **(meth)acryl**calixarenes may be prepared by reaction of calixarene hydroxyl groups with isocyanato functional **(meth)acrylate** compounds, such as isocyanatoethyl **methacrylate or acrylate**, or by the two step reaction with diisocyanates and hydroxy functional **(meth)acrylates**.” (Column 5, line 53)
- US Patent No. 4,952,711: “The term “**(meth)acryl**” is used generally to **refer to both acryl and methacryl functional groups**.” (Column 1, line 20)
- US Patent No. 5,516,812: “In the present composition said at least one **(meth)acryl**-functionalized silicone has at least one **acryl or methacryl** a functional group and at least one hydrolyzable group . . . Preferred functionalized silicones are the methacryloxy or acryloxy alkyl or methacryloxy or acryloxy alkenyl functionalized silicones. **Suitable (meth)acryl**-functionalized silicones for use in the present invention include ... **methacryloxypropyldimethoxysilyl terminated silicone, acryloxypropyldimethoxysilyl terminated silicone or a mixture thereof**.” (Column 8, line 53)
- US Patent No. 6,350,790: “Suitable examples of monomer diluents also include, but are not limited to, aromatic-containing monomers such as **phenoxyalkyl acrylates or methacrylates** (e.g., **phenoxyethyl(meth)acrylate**); phenoxyalkyl alkoxylate **acrylates or methacrylates** (e.g., phenoxyethyl ethoxylate **(meth)acrylate or phenoxyethyl propoxylate(meth)acrylate**);” (Column 11, line 23)

- US Patent No. 6,467,897: "The term **"(meth)acryl"**, as used herein, encompasses **acryl and/or methacryl**." (Column 16, line 32)
- US Patent No. 6,627,672: "For purposes of this invention, **the term (meth)acryl or (meth)acrylate will refer to both methacrylate and acrylate species**." (Column 2, line 65)
- US Patent No. 7,067,601: "As stated above, monofunctional **(meth)acrylate** esters (esters containing one (meth)acrylate group) also may be included in compositions of the present invention. Examples of useful monofunctional **acrylates** include cyclohexyl **methacrylate**, tetrahydrofurfuryl **methacrylate**, hydroxyethyl **acrylate**, hydroxypropyl **methacrylate**, tbutylaminoethyl methacrylate, cyanoethyl **acrylate**, chloroethyl **methacrylate** and m-butoxyethyl **methacrylate**." (Column 3, line 15)
- US Patent No. 7,408,012: "For purposes of the present invention, the terms **(meth)acrylate and (meth)acrylic** are used synonymously with regard to the monomer and monomer-containing component, and these terms **include acrylate, methacrylate, acrylic, and methacrylic**." (Column 4, line 3)
- US Patent No. 7,429,633: "**(Meth)acrylic means methacrylic or acrylic**, and in the case of acrylic the methyl in formula (3) is a hydrogen." (Column 5, line 61)

Again, none of this evidence has been addressed by the Examiner in maintaining the § 112, first paragraph rejection. No reasons are provide why a person of ordinary skill in the art would not understand "(meth)acrylate" to refer to both "acrylate" and "methacrylate."

Affidavit

Applicants also submitted a declaration under 37 C.F.R. § 1.132 of Holger Endres supporting that one of ordinary skill in the art would readily understand that "(meth)acrylates" denote both "acrylates" and "methacrylates" (*see, e.g.*, Endres Decl. at paragraphs 5-7). The Examiner acknowledges this declaration as setting forth the proposition "that (meth)acrylate generically also includes acrylate within its meaning" (Office Action at pages 3-4). However, the Examiner dismisses the declaration "because (meth)acrylate and acrylate do not have identical molecular weights, and the same amounts would have different molar contents" (*id.*). But such a statement about molecular weights is completely irrelevant to the question of whether or not one of ordinary skill in the art would interpret the term "(meth)acrylate" to refer to both "methacrylates" and "acrylates." The claim construction issue has nothing to do with whether or not molecular weights would be the same or

different, but instead turns on how those skilled in the art interpret the term “(meth)acrylates.”

The Examiner offers no evidence or reasoning that, despite the compelling evidence provided in the specification, the public domain, and the affidavit, the term “(meth)acrylate” should be limited to “methacrylates” and should not be construed to also refer to “acrylates.” Given that claims are to be given their broadest reasonable construction “in light of the specification as it would be interpreted by one of ordinary skill in the art” (see MPEP 2111), the Examiner has given the term “(meth)acrylate” an overly narrow construction.

The Office Action improperly ignores Applicants’ evidence and provides no evidence to support any assertion that one skilled in the art would not recognize that the term “(meth)acrylate” is commonly used to denote both acrylates and methacrylates. Given the proper interpretation, the information provided in Table 1 of the specification is clearly acceptable in supporting the claimed concentrations.

The Concentration Teachings Apply To Both Methacrylates and Acrylates

To alternatively support the §112 rejection, the Office Action states that even if “(meth)acrylates” can represent “methacrylates” and “acrylates,” the “concentration of a species does not support the concentration of its genus” (Office Action at page 4, emphasis in original). As previously stated, this assertion is made without any citation to law or fact and is not sufficient to overcome the Examiner’s burden to show that one of ordinary skill in the art would not recognize that Applicants had possession of the claimed concentration range. There does not appear to be any reason why the concentration of species cannot be used to support the concentration parameters for its genus. Indeed, a genus typically gets defined by the species that make it up.

In any event, there is no objection that the specification provides written description support for the claimed concentration regarding acrylates. Instead, the Office Action takes issue with the claimed concentration also applying to methacrylates (see Office Action at page 3). In particular, the Office Action asserts that the teachings of acrylate concentrations do not support (are not transferable) to the concentration of methacrylate compounds (*id.* at pages 3-4). But if one properly accepts that the term “(meth)acrylates” does not only pertain to methacrylates, but instead refers to both methacrylates and acrylates, the objection does not hold.

For example, throughout the description, including in connection with various concentration ranges of polymeric oligomers that are part of the coating material, the term “(meth)acrylate” is used. This includes the disclosure of the initial concentration range of the at least one low molecular weight (meth)acrylate (*see, e.g.*, original claim 1; specification at page 5, lines 1-22) of which the range at issue is a subset. Thus, using the proper interpretation of this term, one would reasonably recognize that such description and values pertain to both methacrylates *and* acrylates. Contrary to the assertion in the Office Action, if you accept that the term “(meth)acrylate” refers to both methacrylates and acrylates, the teachings of one would be transferable to the other. Indeed, in the context of the present invention, both the low molecular weight acrylate and methacrylate compounds are known to act as cross-linking chain extenders – thus there is no reason why one would not consider the teachings of acrylate concentrations to apply to the concentration of both acrylate and methacrylate compounds for this purpose.

Moreover, this is supported by the Endres Declaration that states acrylate and methacrylate compounds that differ only in the presence or absence of the methyl group are known in the art to have similar properties (Endres Decl. at paragraph 7). Thus, one properly interpreting “(meth)acrylate” to mean both methacrylates and acrylates and reading the specification as a whole would understand that Applicants possessed compositions that include acrylate and/or methacrylate components in the amounts disclosed and claimed (*see, id.*). This declaration evidence is probative of the written description issue and cannot be dismissed without proper justification and reasoning.

Accordingly, Applicants submit that, in the absence of evidence to the contrary, recitations of “wherein 2.0 to 9.7 wt %, based upon total coating material, of the at least one low molecular weight (meth)acrylate compounds” are well within Applicants’ disclosure and are not new matter. It is also submitted that such recitations are not disclosed or suggested by any of the art of record. For at least these reasons, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. §112, first paragraph.

DOCKET NO.: HENK-0209 / H5265
Application No.: 10/796,681
Office Action Dated: February 3, 2010

PATENT

Miscellaneous

To the extent the § 112, first paragraph rejection is maintained in the next action, Applicants respectfully request clarification concerning claim 38 which includes the allegedly objectionable recitation, but was indicated to be allowable.

Conclusion

The Applicants assert that the foregoing constitutes a full and complete response to the pending Office Action and that all of the pending claims are in condition for allowance. An early Notice to that effect is, therefore, earnestly solicited.

The Commissioner is hereby authorized to charge any fee deficiency, charge any additional fees, or credit any overpayment of fees, associated with this application in connection with this filing, or any future filing, submitted to the U.S. Patent and Trademark Office during the pendency of this application, to Deposit Account No. 23-3050.

Date: May 3, 2010

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